KONA

INTERNATIONAL AIRPORT AT KEAHOLE

Keahole, North Kona, Hawaii

AIRPORT MASTER PLAN

Prepared for:
State of Hawaii
Department of Transportation
Airports Division

KONA INTERNATIONAL AIRPORT AT KEAHOLE
Keahole, North Kona, Hawaii

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Prepared For The
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

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INTRODUCTION AND SUMMARY

INTRODUCTION AND SUMMARY

This update of the Kona International Airport at Keahole (KOA) Master Plan was undertaken to evaluate the airport's capabilities and role, to review forecasts of future aviation demand, and to plan for the timely development of new or expanded facilities that may be required to meet that demand. The ultimate goal of the master plan is to provide systematic guidelines for the airport's overall development, maintenance, and operation for the next 20 years.

The master plan is intended to be a proactive document which identifies and then plans for future facility needs well in advance of the actual need for the facilities. This is done to ensure that the State of Hawaii Department of Transportation Airports Division (DOT-A) can coordinate project approvals, design, financing, and construction to avoid experiencing detrimental effects due to inadequate facilities.

An important result of the master plan is reserving sufficient areas for future facility needs. This protects development areas and ensures they will be readily available when required to meet future needs. The intended result is a development concept which outlines the proposed uses for all areas of airport property.

The DOT-A recognizes the importance of air transportation to the island community and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an adequate airport is an investment which yields impressive benefits to the island as well as the entire state.

With a sound and realistic master plan, KOA can maintain its role as an important link to the national air transportation system for the island and the state of Hawaii, and maintain the existing public and private investments in its facilities.

MASTER PLAN GOALS AND OBJECTIVES

The primary objective of the master plan is to provide the community and public officials with proper guidance for future development which will address aviation demands and be wholly compatible with the environment. The accomplishment of this objective requires the evaluation of the existing airport and determination of what actions should be taken to maintain an adequate, safe, and reliable airport facility in support of those long term goals. This master plan provides an outline of necessary development and gives those responsible an advance notice of future airport funding needs so that appropriate steps can be taken to ensure that adequate funds are budgeted and planned.

Specific goals for the airport are to:

- Provide a high level of service to passengers, while maintaining the "Hawaiian sense of place."
- Stimulate and support island and state economic development.
- Enhance services for air cargo operations.
- Encourage international flights at the airport.
- Accommodate existing and future general aviation (including corporate aviation) customer needs.
- Maintain good relationships with neighborhood communities by minimizing environmental impacts such as aircraft noise.

Specific objectives of this master plan designed to help in attaining these goals include:

- Research and evaluate socio-economic factors likely to affect the air transportation demand on the island.
- Determine projected needs of airport users through the year 2030 by which to support airport development alternatives.
- Recommend improvements that will enhance the airport's safety capabilities to the maximum extent possible within affordability parameters established jointly with DOT-A.
- Produce current and accurate base maps and Airport Layout Plan drawings.
- Establish a schedule of priorities and an affordable program for the improvements proposed in the Master Plan.
- Prioritize the airport capital improvement program and develop a financial plan.

- Evaluate the potential for enhanced revenue development on the airport.

- Develop active and productive public involvement throughout the planning process.

The Master Plan provides recommendations from which DOT-A may take action to improve the airport and all associated services important to public needs, convenience, and economic growth. The plan benefits all residents of the area by providing a single, comprehensive plan which supports and balances the continued growth of aviation activity with the preservation of the surrounding environs and maintaining a "sense of place" as described below.

SENSE OF PLACE

Sense of place is that relationship between the natural and built environment with the community. In Hawaii, it's often found in the spirit of *aloha.* People often develop a relationship of place through sights, sounds, smells, tastes, temperature, and climate. These unique characteristics, qualities, and features of a place help distinguish one place from another. Kona's spirit of *aloha* can be found throughout the Kona International Airport at Keahole.

As the Kona community continues to grow, Kona International Airport at Keahole keeps its past connected to the future. Although one can't plan or design a sense of place into a building, planners and architects can create the opportunity for a sense of place. Future development and the expansion of the terminal must continue building the relationship between the community, its visitors, and the experience of *aloha.*

MASTER PLAN ELEMENTS AND PROCESS

The KOA Master Plan was prepared in a systematic fashion following FAA guidelines and industry-accepted principles and practices. The master plan has six chapters plus appendices that are intended to assist in planning for future facility needs and provide the supporting rationale for their implementation.

Chapter One - Inventory summarizes the inventory efforts. The inventory efforts focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information was collected on existing airport facilities and operations. Local economic and demographic data was collected to define the local growth trends. Planning studies which may have relevance to the master plan were also collected and reviewed.

Chapter Two - Forecasts examines the potential aviation demand for aviation activity at the airport. This analysis reviews and updates the KOA demand forecasts previously prepared for DOT-A in the *Hawaii Aviation Demand Forecasts Update.* The forecast effort takes into account local socioeconomic information, as well as national air transportation trends to quantify the levels of aviation activity

which can reasonably be expected to occur at KOA through the year 2030. The results of this effort were used to determine the types and sizes of facilities which will be required to meet the projected aviation demands on the airport through the planning period.

Chapter Three - Facility Requirements comprises the demand/ capacity and facility requirements analyses. The intent of these analyses is to compare the existing facility capacities to forecast aviation demand and determine where deficiencies in capacities (as well as excess capacities) may exist. Where deficiencies are identified, the size and type of new facilities to accommodate the demand are identified. The airfield analysis focuses on improvements needed to serve the type of aircraft expected to operate at the airport in the future, as well as navigational aids to increase the safety and efficiency of operations. This element also examines the passenger terminal complex, air cargo facilities, general aviation facilities, and support needs.

Chapter Four - Alternatives considers a variety of solutions to accommodate the projected facility needs. This element proposes various facility and site plan configurations which can meet the projected facility needs. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a conceptual direction for development.

Chapter Five – Recommended Airport Plan provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. From this, the airport's capital needs are outlined. An environmental overview is also provided as an appendix. The master plan also supports the official Airport Layout Plan (ALP) and detailed technical drawings depicting related airspace, land use, and property data. These drawings are used by the Federal Aviation Administration (FAA) in determining grant eligibility and funding.

Chapter Six - Financial Plan examines and refines the capital needs program, including the schedules and costs for the recommended development projects. The plan then evaluates the potential funding sources to analyze financial strategies for successful implementation of the plan.

COORDINATION

The KOA Master Plan is of interest to many within the local community. This includes local citizens, community organizations, airport users, airport tenants, local and state planning agencies, and aviation organizations. As the airport is a strategic component of the state and national aviation systems, the KOA Master Plan is of importance to both state and federal agencies responsible for overseeing air transportation.

To assist in the development of the master plan, the Hawaii DOT-A identified a group of community members and aviation interest groups to act in an advisory role in the development of the master plan. Members of the Technical Advisory Committee (TAC) met four times during the process to

review phase reports and provide comments at each step to help ensure that a realistic, viable plan was developed.

To assist in the review process, draft working papers were prepared at the various milestones in the planning process. The working paper process allowed for timely input and review during each step within the master plan to ensure that all master plan issues were addressed as the recommended program develops.

A series of four public information workshops were also held as part of the plan coordination. The public information workshops were designed to allow any and all interested persons to become informed and provide input concerning the master plan. Notices of meeting times and locations were advertised through the media as well as local neighborhood associations. The notices as well as the draft working papers were also made available to the public online.

SUMMARY AND RECOMMENDATIONS

The proper planning of a facility of any type must consider the demand that may occur in the future. For Kona International Airport at Keahole, this involved updating forecasts to identify potential future aviation demand. Because of the cyclical nature of the economy, it is virtually impossible to predict with certainty year-to-year fluctuations in activity when looking five, ten, and twenty years into the future.

Recognizing this reality, the Master Plan is keyed more to potential demand "horizon" milestones than future dates in time. These "planning horizons" were established as levels of activity that will call for consideration of implementation of the next step in the Master Plan program. By developing the airport to meet aviation demand levels instead of specific points in time, the airport will serve as a safe and efficient aviation facility which will meet the operational demands of its users while being developed in a cost-efficient manner. This program allows the DOT-A to adjust specific development in response to unanticipated needs or demand. The forecast planning horizons are summarized in **Table A**.

The recommended Master Plan Concept includes improvements to the airfield, terminal area, air cargo, and general aviation facilities to meet current and forecast needs over the long range planning horizon. It is also designed to ensure a viable aviation facility for the West Coast, the Big Island, and the State well beyond the long range horizon. The recommended concept is depicted on **Exhibit A**. The following sections further detail these plans and recommendations.

TABLE A
Aviation Demand Planning Horizons
Kona International Airport at Keahole

	Base Year (2006)	Short Term	Intermediate	Long Term
Annual Passengers	3,033,212	3,472,000	3,819,000	4,721,000
Annual Air Cargo (Tons)	32,390	39,000	45,000	62,000
Based GA Aircraft	61	102	118	160
Annual Operations				
Airline	37,436	39,800	41,400	45,800
Air Cargo	4,372	4,700	5,100	6,100
Other Air Taxi	9,116	15,500	18,000	24,000
GA Itinerant	18,340	31,000	36,000	48,000
GA Local	54,650	89,000	101,000	134,000
Military	19,304	30,000	30,000	30,000
Total Operations	143,218	210,000	231,500	287,900

AIRFIELD

The airfield is the lifeblood of any airport, as it is the direct air-to-ground interface. Of key importance is to ensure that airport design standards are adequately planned for and met. Recommendations are then provided to improve the operational efficiency, circulation, and capability of the airfield.

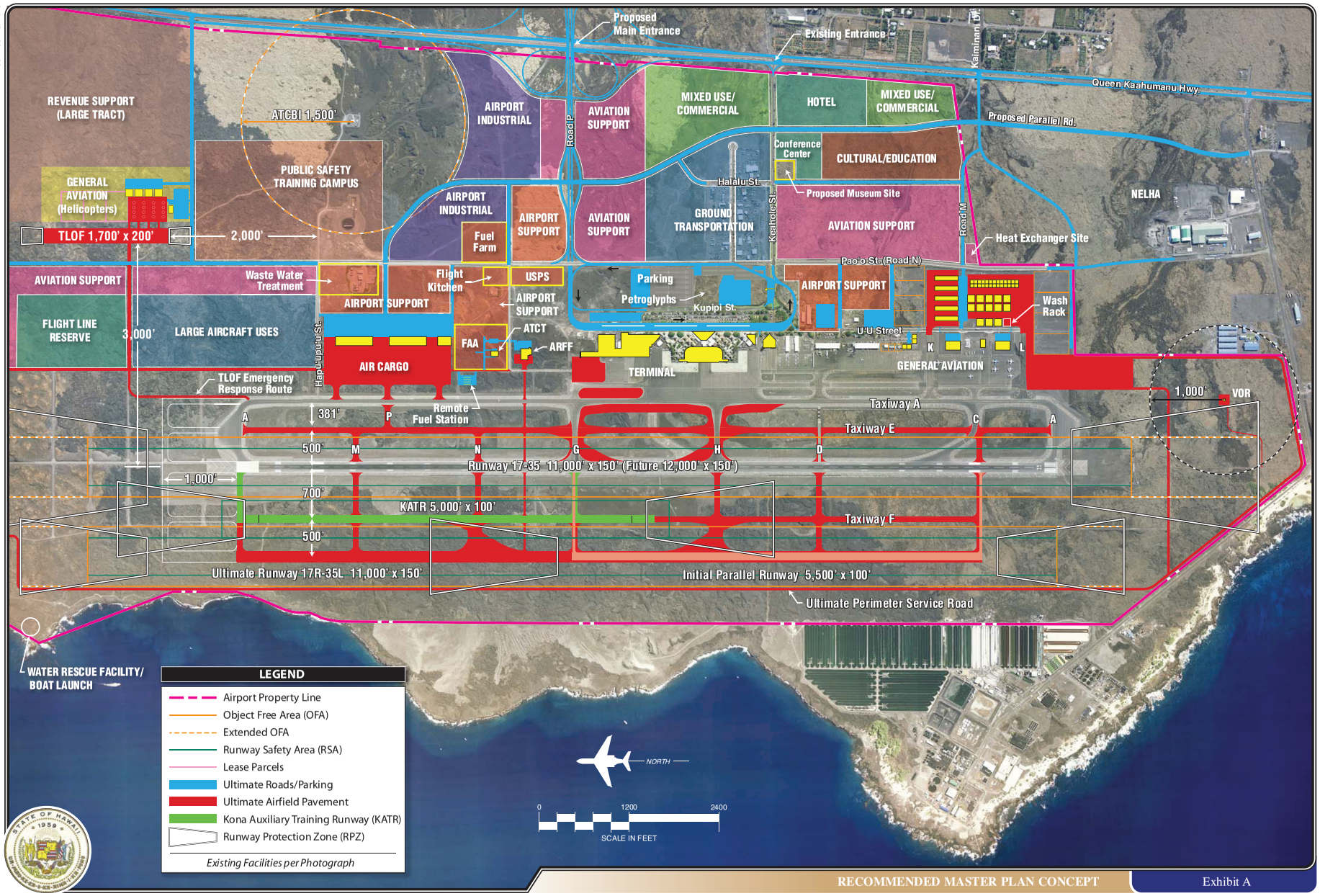
Runway 17-35 will remain the primary runway in the future, although it will ultimately be used in concert with a parallel runway and a helicopter touchdown and lift-off (TLOF) area. It is planned to be capable of accommodating the Boeing 747, as well as to serve as an alternate airport for the largest civilian aircraft, the Airbus A380-800.

The helicopter TLOF is planned mauka (east) of the rest of the airfield at a separation that will allow it to operate independent of the runways, thus increasing airport capacity. A facility complete with apron, small terminal, hangars, and auto parking are planned.

The parallel runway is initially planned at 5,500 feet to relieve general aviation traffic. It can be extended in the future to serve a full range of commercial activity at the airport and ensure that the airport is not shut down when its primary runway is temporarily closed for any reason.

The Kona auxiliary training runway (KATR) is included in the plans for development by the Department of Defense. It will be used by C-17 military aircraft to practice short field landings. If developed to a length of 5,000 feet and 100 feet wide, the KATR could be available for civilian use when not being used for military training until such time as the parallel runway can be developed.

Taxiway improvements are also planned to improve airfield efficiency and circulation as traffic grows. Plans also include new support facili-


06MP06-A-5/11/10
Proposed Main Entrance
Existing Entrance
Kaiminani Dr.
Queen Kaahumanu Hwy.
Proposed Parallel Rd.
REVENUE SUPPORT (LARGE TRACT)
ATCBI 1,500'
PUBLIC SAFETY TRAINING CAMPUS
AIRPORT INDUSTRIAL
Road P
AVIATION SUPPORT
MIXED USE/ COMMERCIAL
HOTEL
MIXED USE/ COMMERCIAL
Conference Center
CULTURAL/EDUCATION
Halalu St.
Proposed Museum Site
NELHA
GENERAL AVIATION (Helicopters)
TLOF 1,700' x 200'
2,000'
AIRPORT INDUSTRIAL
Fuel Farm
AIRPORT SUPPORT
AVIATION SUPPORT
GROUND TRANSPORTATION
Keahole St.
AVIATION SUPPORT
Road M
Heat Exchanger Site
Pao'o St. (Road N)
AVIATION SUPPORT
Waste Water Treatment
AIRPORT SUPPORT
Flight Kitchen
USPS
AIRPORT SUPPORT
Parking
Petroglyphs
Kupipi St.
AIRPORT SUPPORT
Wash Rack
FLIGHT LINE RESERVE
3,000'
LARGE AIRCRAFT USES
Hapu'upu'u St.
AIR CARGO
FAA
ATCT
ARFF
U-U Street
K
L
GENERAL AVIATION
TERMINAL
TLOF Emergency Response Route
Remote Fuel Station
1,000'
VOR
Taxiway A
A
381'
P
Taxiway E
C
A
500'
M
N
G
H
D
Runway 17-35 11,000' x 150' (Future 12,000' x 150')
1,000'
700'
KATR 5,000' x 100'
Taxiway F
500'
Ultimate Runway 17R-35L 11,000' x 150'
Initial Parallel Runway 5,500' x 100'
Ultimate Perimeter Service Road
WATER RESCUE FACILITY/ BOAT LAUNCH
LEGEND
Airport Property Line
Object Free Area (OFA)
Extended OFA
Runway Safety Area (RSA)
Lease Parcels
Ultimate Roads/Parking
Ultimate Airfield Pavement
Kona Auxiliary Training Runway (KATR)
Runway Protection Zone (RPZ)
Existing Facilities per Photograph
NORTH
0
1200
2400
SCALE IN FEET
RECOMMENDED MASTER PLAN CONCEPT
Exhibit A

ties such as a new airport traffic control tower (ATCT), a new aircraft rescue and firefighting station (ARFF), a water rescue facility with a boat launch, and relocation of the VOR (very high frequency omni-directional range) facility onto the south side of the airport.

PASSENGER TERMINAL

While the airfield is the lifeblood, the passenger terminal is the spirit of the airport. It is the facility that is frequented by the most people and serves as a gateway to the island. That is why it is important that Kona's spirit of *aloha* is carried throughout the passenger terminal and beyond.

The passenger terminal improvements are designed to modernize the existing facility while maintaining the Hawaiian "sense of place," as well as prepare to accommodate the long term planning horizon level of 4.7 million annual passengers. **Exhibit B** depicts the short and intermediate horizon plans for the terminal. Terminal development priorities were determined to be as follows:

1. Improve baggage claim areas to reduce crowding and improve circulation, ventilation, and lighting. This is addressed first through relocating the perimeter rails around the baggage claim, then with additional claim devices and general expansion of the claim area.

2. Improve the ticket lobby experience and reduce crowding. This is addressed within the plan by creating a centralized ticket lobby with adequate space for queuing and processing functions without hindering passenger wayfinding and flow. This will first require the relocation of the Ellison S. Onizuka Space Center from the terminal area. A new site for the space center has been determined opposite the Keahole Street entrance to the rental car area.

3. Improve TSA security checkpoint operations. This is addressed by consolidating the two current TSA checkpoints into one centralized screening location.

4. Implement TSA in-line baggage screening. This is addressed with plans for a centralized in-line security screening system, where baggage would be transported by belts after check-in, then redistributed to the airlines after screening. As an option, agricultural screening of checked bags could be put in-line as well.

5. Increase gate holdroom areas. This is addressed with a second level departure concourse for overseas flights that would be located between the two existing ground level departure areas. The ground level departure areas will remain for handling inter-island flights.

6. Improve CBP international arrivals experience. This is addressed with plans to replace the current structure with an expanded permanent facility in the same area.

To accommodate the terminal development, Taxiway A will be relocated

114 feet makai (west) on the other side of the terminal. The terminal loop road is also planned to be relocated mauka (west) from Kupippi Street to Pao`o Street (Road N) to contain all terminal parking within the loop system.

The proposed improvements could require the terminal curb to be relocated 30 feet Mauka (east). The need for the shift, however, will be dependent upon the final terminal design. If the design does not require additional mauka space for pre-security queuing, the roadway and the ground transportation building could be maintained.

AIR CARGO

As cargo traffic grows, it is recommended that cargo be consolidated to an area north of the passenger terminal. This will not only consolidate the use, but separate it from the general aviation activity at the south end of the terminal area. It will also provide space for full screening of all outbound freight, if necessary, in the future.

The cargo buildings are aligned parallel to the runway with apron makai (west) and truck docks and vehicle parking mauka (east).

Space is also provided at the south end of the cargo complex for a Joint Inspection Facility building. This is designed to house the Hawaii Department of Agriculture (HDOA), the United States Department of Agriculture (USDA), and other state and federal agencies with jurisdiction over cargo exports and imports.

GENERAL AVIATION

The general aviation (GA) facilities are planned to remain south of the passenger terminal, and expand with the eventual relocation of the air cargo facilities to the north. This will ultimately provide three distinct and separate functional areas for the primary aviation uses on the airport.

Property mauka (east) of U`u Street has been divided into four areas for lease to private developers through a request for proposal (RFP) process. The DOT-A intends these areas to have corporate/general aviation facilities constructed to assist in meeting the future demands as expressed by the general aviation community.

The ramp south of Taxilane K remains as a corporate ramp with expansion planned south of Taxilane K. The south ramp expansion also includes a location for a wash rack next to a site that would be reserved by DOT-A for future consideration as to its use.

North of Taxilane K is the site for an interim commuter air terminal (CAT) to be used until such time as a permanent location can be developed on the site now occupied by the ATCT and the ARFF. At that time, the interim terminal can be converted into a GA terminal and GA offices. Currently in the design stages, the interim CAT will be the first LEED-certified facility on the airport.

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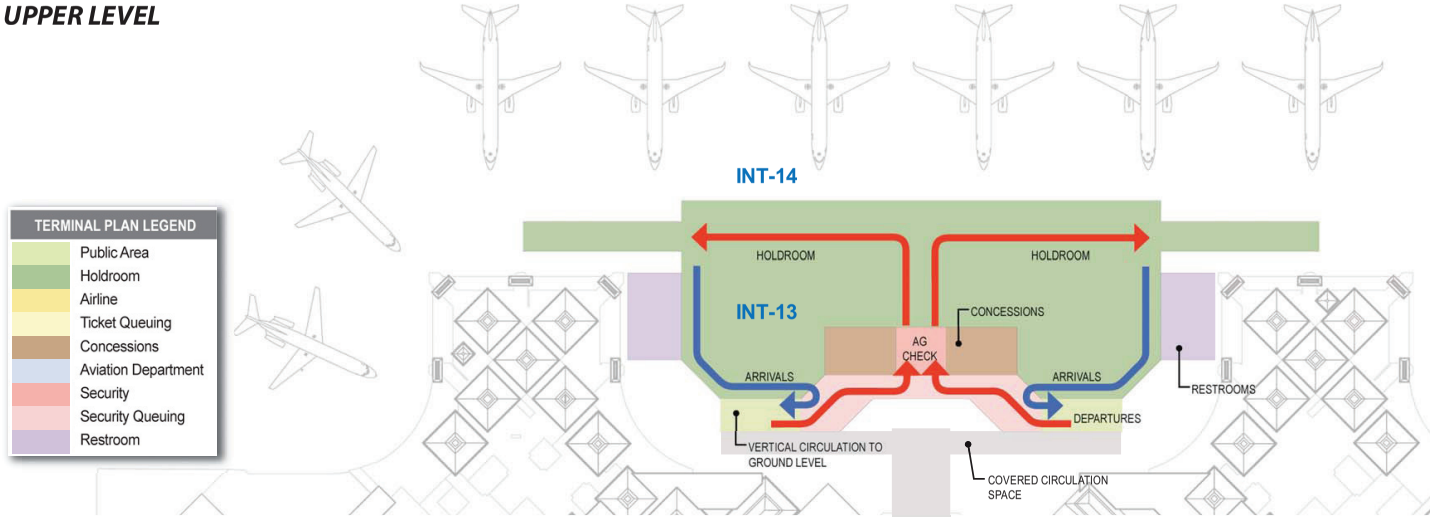
UPPER LEVEL



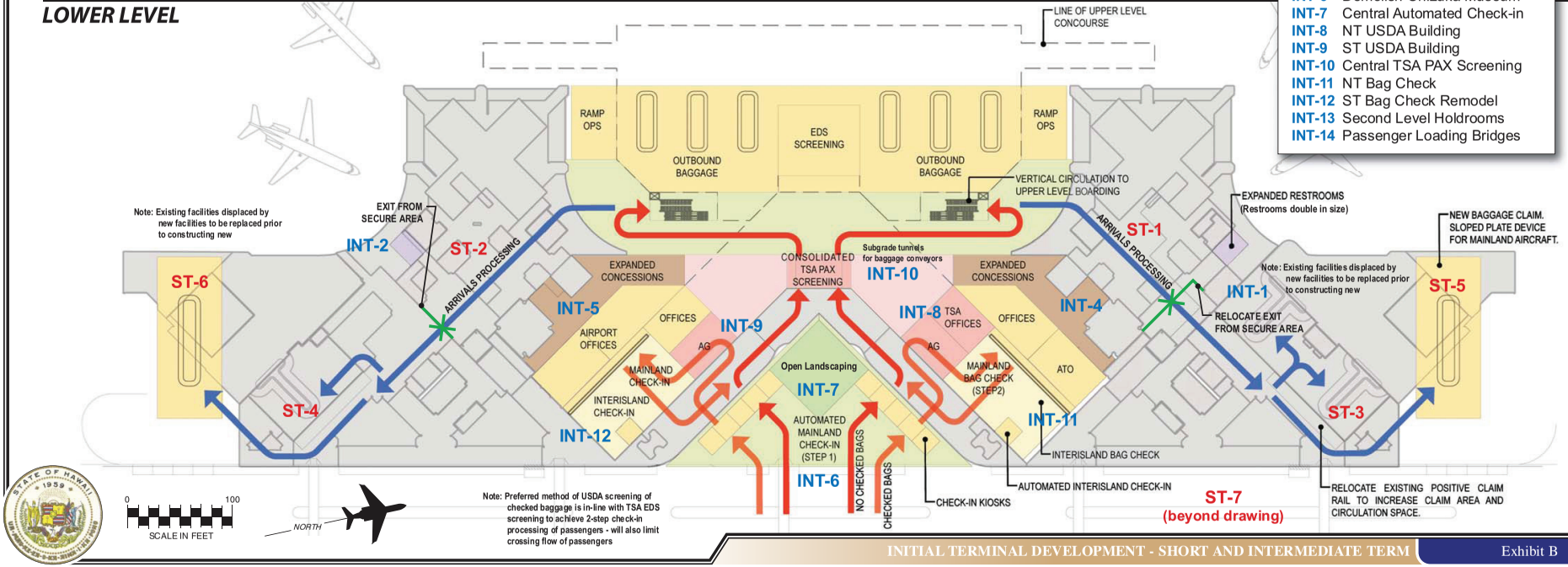
SHORT TERM

ST-1	NT Courtyard Canopies
ST-2	ST Courtyard Canopies
ST-3	NT Bag Claim Retrofits
ST-4	ST Bag Claim Retrofits
ST-5	NT Bag Claim / IBB
ST-6	ST Bag Claim / IBB
ST-7	Employee Parking Expansion

INTERMEDIATE TERM

INT-1	NT Expand Restrooms
INT-2	ST Expand Restrooms
INT-3	Central OBB / EDS / Tunnels (not shown)
INT-4	NT Concessions
INT-5	ST Concessions
INT-6	Demolish Onizuka Museum
INT-7	Central Automated Check-in
INT-8	NT USDA Building
INT-9	ST USDA Building
INT-10	Central TSA PAX Screening
INT-11	NT Bag Check
INT-12	ST Bag Check Remodel
INT-13	Second Level Holdrooms
INT-14	Passenger Loading Bridges

LOWER LEVEL



The buildings on parcels immediately north of the commuter terminal are on small parcels that can continue to be used for general aviation businesses. Proceeding north along the flightline, the current cargo buildings can be converted to GA specialty suites after the cargo facilities are moved north of the passenger terminal. The specialty suites would have subdivided space in each building that can be leased to various general aviation specialty operators for flight training, small aircraft charter operators, avionics shop, etc. The ramp in front of these buildings would also be converted to general aviation parking.

OTHER LAND USES

There are two primary considerations for on-airport land use planning. First is to secure those areas essential to the safe and efficient operation of the airport. Once these uses are provided for now and into the future, other uses that are compatible with and complement the primary uses can be considered. They should provide a function that is either a complimentary service to the airport (i.e., warehousing and storage, ground transportation, public safety training, hotel/conference center, etc.), a cultural tie that enhances the "Hawaiian sense of place" at the airport, and/or enhances revenues in support of the airport operation. **Exhibit A** depicts the location of these other key uses.

The north flight line beyond the cargo area is reserved for large aircraft uses. This is envisioned to be the location for airline maintenance facilities and for hangars that could accommodate the largest corporate aircraft.

The center core area between Keahole Street and future Road P is the current and future location for ground transportation facilities. This consists primarily of rental car facilities. Additional area for ground transportation facilities has been reserved north of the existing facilities.

An area for a public safety training campus is another use that relates to airport needs, but also has the potential to serve the broader-based community. An 80-acre campus is depicted south of the helicopter facilities.

Other aviation support areas are planned and could house airport administration, FAA, TSA, airline and other airport-related offices in a campus-like setting that does not have to be at or near the flightline.

Area has also been reserved for the relocation of the Ellison S. Onizuka Space Center. Adjacent uses are planned to support a cultural education center as well as a hotel and conference center.

Other airport industrial and mixed-use commercial uses are planned to round out the land use mix. These are expected to include warehousing and businesses that can directly benefit from proximity to the airport and provide revenue support towards the airport's self-sufficiency.

Another important factor to the plan is access to the airport. Road P is planned as the future primary entrance with the capability for devel-

opment of a grade separation interchange with Queen Kaahumanu Highway. An internal road system is planned to provide access and circulation for all airport uses that does not get funneled through the passenger terminal area as it does today. The road system also allows for flexibility in serving future transit options being considered for west Hawaii.

FINANCIAL PLAN

The recommended improvements are grouped by planning horizon. The short term planning horizon contains projects of highest priority (collectively referred to as the "Early Works" projects), including, but not limited to, those already identified in the statewide CIP, and those relating to meeting safety design standards. As short term improvements are completed, DOT-A would begin programming the intermediate term projects, and finally the long term needs.

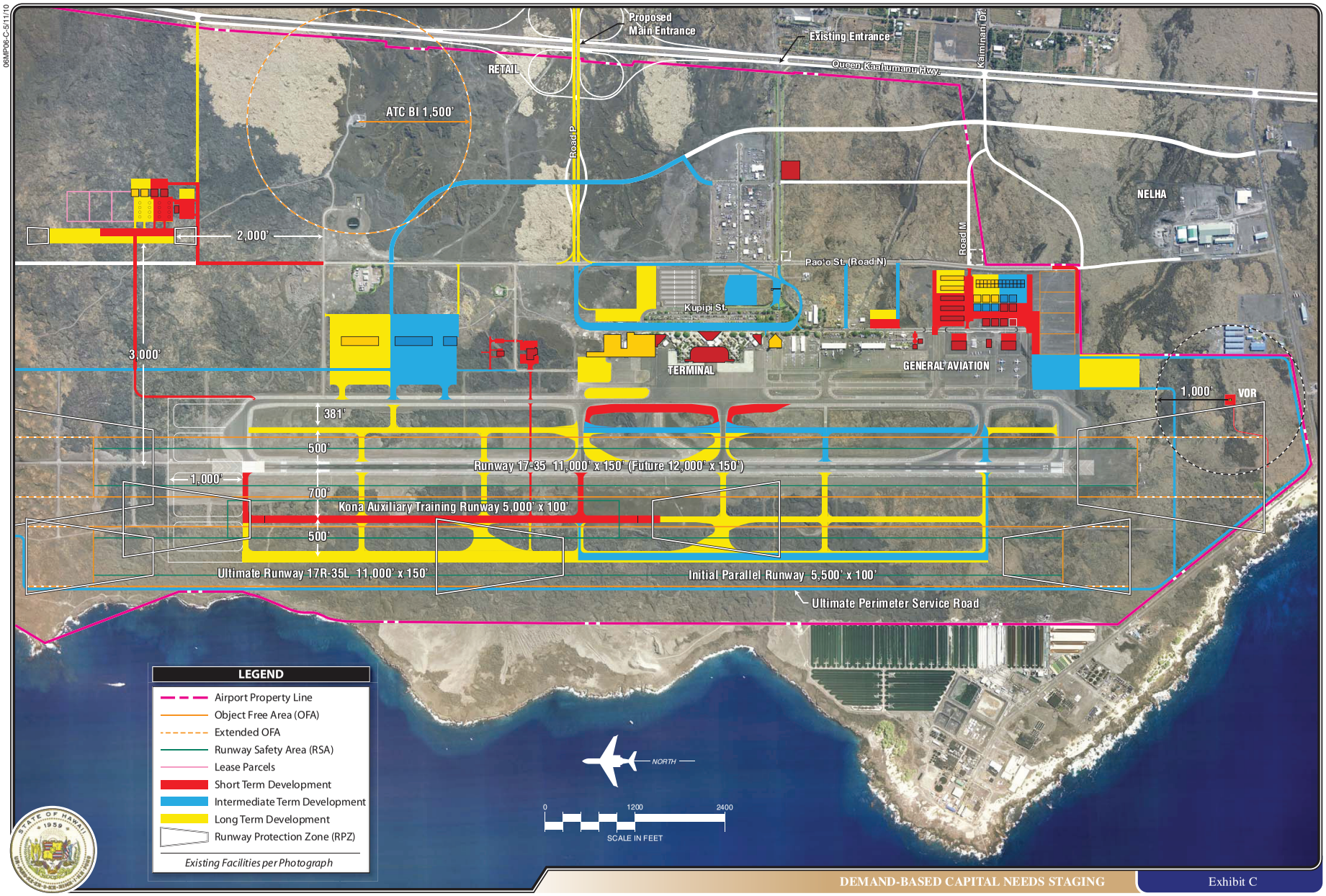
The development of the recommended master plan concept is intended to follow demand-driven indicators. For example, the plan anticipates the construction of a parallel runway to accommodate general aviation operations in the intermediate term. Increased air traffic will be the indicator for the need of the runway, and the timing of the construction will depend on meeting that demand. Some development items, such as major maintenance of existing facilities at the airport are intended to meet FAA standards and would not be considered demand-driven.

Table B presents a summary of estimated project costs (in 2008 dollars) for the capital needs program (CNP) in the planning period during which those costs are proposed to occur.

The 20-year capital needs program for KOA focuses heavily on meeting FAA design standards for safety, improving overall airfield capacity, and providing developable space for landside facilities to accommodate forecasted growth of based aircraft. **Exhibit C** depicts the proposed staging by planning horizon.

The 20-year investment total is approximately $780 million. Projects eligible for FAA grant assistance through its Airport Improvement Program (AIP) total approximately $310 million. Therefore, an estimated $470 would fall under other funding sources including private financing and Airports System Special Funds. It should be noted that although a project is eligible for federal funding, there is no guarantee that the project will receive federal funding. Nationwide, AIP-eligible airport projects typically exceed AIP funding availability by a wide margin.

The financial plan for the Kona International Airport Master Plan anticipates that project costs would be funded with a combination of federal grants-in-aid, Transportation Security Administrative funds, passenger facility charge (PFC) revenues, internally generated cash flow, and future bonds to be repaid in part from revenues of the Airports System and in part from PFC revenues. In addition, a significant share of the capital costs is anticipated to be funded through tenant and third party financing. Beyond the short-term period through FY 2012, it is assumed that DOT-A will continue


08MP06-C-5/11/10
Proposed
Main Entrance
Existing Entrance
Queen Kaahumanu Hwy
Kaiminani Dr
RETAIL
ATC BI 1,500'
Road P
NELHA
Road M
Pao'o St. (Road N)
Kupipi St.
2,000'
3,000'
TERMINAL
GENERAL AVIATION
1,000'
VOR
381'
500'
Runway 17-35 11,000' x 150' (Future 12,000' x 150')
1,000'
700'
Kona Auxiliary Training Runway 5,000' x 100'
500'
Ultimate Runway 17R-35L 11,000' x 150'
Initial Parallel Runway 5,500' x 100'
Ultimate Perimeter Service Road
LEGEND
Airport Property Line
Object Free Area (OFA)
Extended OFA
Runway Safety Area (RSA)
Lease Parcels
Short Term Development
Intermediate Term Development
Long Term Development
Runway Protection Zone (RPZ)
Existing Facilities per Photograph
NORTH
0
1200
2400
SCALE IN FEET
DEMAND-BASED CAPITAL NEEDS STAGING
Exhibit C

to develop the Airport as required to meet the needs of increased passenger demand, consistent with future funding sources available to the State at the time of project implementation. The financial feasibility of future projects will be determined by the provisions of existing or future tenant agreements (including Airlines), funding levels and participation rates of federal grant-in-aid programs, availability of PFC revenues (pay-as-you-go and leveraged), revenue bond capacity, and the ability to generate discretionary cash flow from Airport operations.

TABLE B
Master Plan Capital Needs Plan
(in 2008 Dollars)

	Short Term FY08-FY12	Intermediate FY13-FY17	Long Term FY18-FY30	Total FY08-FY30
Airfield				
Terminal Apron Expansion West	$9,419,000	$6,232,000	$ ---	**$15,651,000**
Runway 17-35	---	5,994,000	4,562,000	**10,556,000**
Parallel Runway 17R-35L	---	18,289,000	47,065,000	**65,354,000**
Taxiways G & F West & South of KATR	---	272,000	19,994,000	**20,266,000**
Taxiway Renovations & Improvements	---	5,141,000	30,014,000	**35,155,000**
Airfield Lighting	---	675,000	---	**675,000**
Other Airfield	---	6,511,000	---	**6,511,000**
	$9,419,000	$43,114,000	$101,635,000	**$154,168,000**
Terminal Area				
Terminal Expansion	$94,772,000	$133,328,000	$203,100,000	**$431,200,000**
Parking Lot Expansion	---	6,585,000	3,629,000	**10,214,000**
	$94,772,000	$139,913,000	$206,729,000	**$441,414,000**
Parking & Roadway				
Employee Parking Expansion	$ ---	$ ---	$ ---	**$ ---**
Roadways	---	2,430,000	5,184,000	**7,614,000**
	$ ---	$2,430,000	$5,184,000	**$7,614,000**
Cargo Area				
Phase I	$ ---	$41,731,000	$ ---	**$41,731,000**
Phase II	---	---	35,738,000	**$35,738,000**
	$ ---	$41,731,000	$35,738,000	**$77,469,000**
General Aviation				
Aircraft Wash Rack	$743,000	$ ---	$ ---	**$743,000**
Commuter Air Terminal (CAT)	3,578,000	---	11,340,000	**14,918,000**
Apron Expansion	---	5,164,000	4,050,000	**9,214,000**
GA Auto Parking	122,000	---	122,000	**244,000**
Roadway Access	491,000	491,000	---	**982,000**
	$4,934,000	$5,655,000	$15,512,000	**$26,101,000**
Heliport				
Site Preparation	$3,897,000	$ ---	$ ---	**$3,897,000**
Roadway Access	3,856,000	---	---	**3,856,000**
Phase I	6,028,000	---	5,184,000	**11,212,000**
Phase II	---	---	1,583,000	**1,583,000**
	$13,781,000	$ ---	$6,767,000	**$20,548,000**
Other				
ARFF Station Installation	$17,288,000	$ ---	$ ---	**$17,288,000**
Utilities Master Plan	500,000	---	---	**500,000**
Airport Administration Facility	---	10,000,000	---	**10,000,000**
Regional ARFF Training Facility	---	25,000,000	---	**25,000,000**
	$17,788,000	$35,000,000	$ ---	**$52,788,000**
Capital Needs Program Total	**$140,694,000**	**$267,843,000**	**$371,565,000**	**$780,102,000**

The financial projections were prepared on the basis of available information and assumptions as set forth in **Chapter Six** of this master plan. It is believed that such information and assumptions provide a reasonable basis for the projections to the level of detail appropriate for an airport master plan. Based on these assumptions, the capital improvement program could be financed in the future by the State and result in key financial indicators that are consistent with the historical results of the Statewide Airports System and industry comparables. However, some of the assumptions used to develop the projections will not be realized and unanticipated events and circumstances may occur. Therefore, the actual results may vary from those projected and such variations could be material.